

WHAT IS CLAIMED IS:

1. A method of collecting and testing data from a plurality of patient point of care locations, the method comprising:

controlling a central device to receive sample data from at least one sample testing device at a patient point of care location, said sample testing device adapted to engage a sample cartridge and provide said sample data, said central device adapted to maintain at least one database;

controlling said central device to receive cartridge identifier information from said sample testing device;

controlling said central device to tag said received sample data with a patient identifier label information, said patient identifier label information communicated to said central device via a data input device; and

controlling said central device to update said database based upon at least one of said received sample data, cartridge identifier information and patient identifier information, and provide said database to a network server.

2. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, further comprising:

controlling said sample testing device to communicate said sample data to said central device as at least one data packet communicated from said sample testing device via a first wireless communication module.

3. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 2, further comprising:

controlling said sample testing device to communicate said sample data in a multiplexed format, said format including at least one of a time-division multiple access (TDMA) format, code-division multiple access (CDMA) format, and frequency-division multiple access (FDMA) format.

4. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, further comprising:

controlling said central device to receive said sample data from a plurality of sample testing devices simultaneously via a second wireless communication module.

5. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, further comprising

controlling said central device to communicate data to said sample testing device as at least one data packet communicated from said central device via a second wireless communication module.

6. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, further comprising

controlling said central device to communicate data to said patient identifier information label as at least one data packet communicated from said central device via a second wireless communication module.

7. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 6, wherein said patient identifier information label is a radio frequency identification label.

8. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said data input device is at least one of a bar code reader and a radio frequency identification label.

9. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said data input device is incorporated with said sample testing device.

10. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said data input device is incorporated with said central device.

11. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said sample data comprises pH, pCO₂, pO₂, pCl, pNO₃, Na⁺, Ca⁺⁺, K⁺, hematocrit and glucose levels in said sample.

12. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said testing device comprises at least one of a hand-held analytical device and stand-alone computer workstation, said testing device located within a contamination field about a patient at a patient point of care location.

13. A method of collecting and testing data from a plurality of patient point of care locations as claimed in claim 1, wherein said central device comprises at least one of a hand-held analytical device and stand-alone computer workstation, said central device located beyond a contamination field about a patient at a patient point of care location.

14. A system, adapted to collect and test data at a patient point of care location from a point located beyond a contamination radius about a patient using modular components to create a point of care network, the system comprising:

- a sample cartridge, adapted to engage a sample testing device for testing a collected sample at a patient point of care location, said sample cartridge including a cartridge identifier mechanism, adapted to provide cartridge identifier information;

- a patient identifier label, adapted to provide patient identifier information; and

- a central device, adapted to receive sample data from said sample testing device at a patient point of care location, said central device being further adapted to maintain at least one database and to update said database based upon at least one of

said cartridge identifier information, patient identifier information, and received sample data, and to provide said database to a network server.

15. A system as claimed in claim 14, wherein:

said central device is further adapted to tag said received sample data with said patient identifier label information.

16. A system as claimed in claim 14, wherein:

said sample testing device is adapted to communicate said sample data to said central device as at least one data packet communicated from said sample testing device via a first wireless communication module.

17. A system as claimed in claim 15, wherein:

said sample testing device is adapted to communicate said sample data in a multiplexed format, said format including at least one of a time-division multiple access (TDMA) format, code-division multiple access (CDMA) format, and frequency-division multiple access (FDMA) format.

18. A system as claimed in claim 14, wherein:

said central device is adapted to receive said sample data from a plurality of sample testing devices simultaneously via a second wireless communication module.

19. A system as claimed in claim 14, wherein

said central device is adapted to communicate data to said sample testing device as at least one data packet communicated from said central device via a second wireless communication module.

20. A system as claimed in claim 14, wherein

said central device is adapted to communicate data to said patient identifier information label as at least one data packet communicated from said central device via a second wireless communication module.

21. A system as claimed in claim 14, wherein said patient identifier information label is a radio frequency identification label.

22. A system as claimed in claim 14, wherein said data input device is at least one of a bar code reader and a radio frequency identification label.

23. A system as claimed in claim 14, wherein said data input device is incorporated with said sample testing device.

24. A system as claimed in claim 14, wherein said data input device is incorporated with said central device.

25. A system as claimed in claim 14, wherein said sample data comprises pH, pCO₂, pO₂, pCl, pNO₃, Na⁺, Ca⁺⁺, K⁺, hematocrit and glucose levels in said sample.

26. A system as claimed in claim 14, wherein said testing device comprises at least one of a hand-held analytical device and stand-alone computer workstation, said testing device located within a contamination field about a patient at a patient point of care location.

27. A system as claimed in claim 14, wherein said central device comprises at least one of a hand-held analytical device and stand-alone computer workstation, said central device located beyond a contamination field about a patient at a patient point of care location.